



STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

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January 28, 1987

FILE COPY

Mr. Murray C. Godbe, III  
Geological Engineer  
1012 Newhouse Building  
Salt Lake City, Utah 84111

Dear Mr. Godbe:

Re: Initial Completeness Review, Revision to Mining & Reclamation Plan, Pilot Plant Development Phase, Sevier Dry Lake Project, PRO/027/008-86(1), Millard County, Utah

The Division has completed the technical review of your December 11, 1986 proposal to revise the original mining and reclamation plan permit application for the Sevier Dry Lake Project, which received tentative approval July 22, 1986.

The operator proposes to construct and operate a small scale pilot operation in order to obtain the technical data necessary for the design of a full scale potash production complex. As proposed, the following work will be accomplished under this amendment:

- 1) Establishment of a temporary construction staging area (@2 acre disturbance).
- 2) Construction of a containment dike and associated interior pond separation dikes (main dike @10 acre disturbance, interior separation dikes @5 acre disturbance).
- 3) Establishment of a source for the containment dike construction materials (@50,000 cu. yds., no disturbed acreage given).
- 4) Drilling a plant process water test well (Dia. 14", TD 200').
- 5) Drilling a brine recovery test well (Dia. 14", TD 200')

If a 3-4 acre disturbance is assumed for the dike borrow area, the additional disturbed area for the project revision would be approximately 20 acres. The original Sevier Dry Lake Project permit application (PRO/027/008) has been tentatively approved for approximately 40 acres of surface disturbance. The current proposal represents a significant departure from the plan of operations as tentatively approved. Therefore, the Division will review this modification as a permit revision. Upon tentative approval, another 30-day public notice advertisement will be forwarded to the newspaper agency.

ENGINEERING AND RECLAMATION BONDING:

Rule M-5 - Surety - FJF

The revision lacks the following information necessary to calculate a detailed bond estimate:

- A. Borrow Area - acreage affected, quantity of topsoil to be salvaged, specific fertilizer and seed mix to be used in reclaiming the borrow area
- B. Dike Area - proposed reclamation plan
- C. Water Wells - plugging program

A worst case scenario has been assumed and a reclamation bond estimate prepared based on those assumptions. This reclamation bond may be lowered if more detailed plans are submitted.

Reclamation Estimate

- A. Borrow Area (Area on map appears to be approximately 40 acres).
  - 1. Grade and spread salvaged topsoil with D-8 Cat at 1 acre per hour.  
 $40 \text{ hours} \times \$170/\text{hour} = \$6,800$
  - 2. Assume same revegetation plan and revegetation costs as previous submittal.  
 $40 \text{ acres} \times \$680/\text{acre} = \$27,200$
- B. Dike Reclamation
  - 1. Assume containment dikes and interior dikes will be graded over with D-8 Cat.
  - 2.  $40 \text{ hours} \times \$170/\text{hour} = \$6800$
- C. Water Well Plugging
  - 1. Assume that to isolate the aquifer it will be necessary to plug the wells with cement from top to bottom.
  - 2. 2 wells at \$2500 per well = \$5,000

D. Reclamation of Campsite

1. Assume operators stated cost of \$2500

Total Reclamation Cost

A. Borrow Area	\$34,000
B. Dike Reclamation	6,800
C. Water Well Plugging	5,000
D. Campsite Removal	2,500
E. Contingency (10%)	4,800
Total in 1987 Dollars	\$53,100
Total in 1992 Dollars (Escalation for 5 years at 1.62% per year)	\$57,500

SOILS CONCERNS:

Rule M-3(2) - Reclamation Plan - JSL

On page three, the operator commits to stockpile and redistribute topsoil "as recommended". The operator must specify in detail all recommended procedures. Division correspondence (dated June 20, 1986) to the operator included a specific soil reclamation handling plan based on the premise that no topsoil is available for salvage. This plan was sufficient for the previous area of proposed disturbance. If no topsoil is available for salvage, the operator may commit to the June 20, 1986 Division soil handling recommendation. However, because the revision proposes disturbance within BLM administered property, the operator must also obtain approval or concurrence for the recommended plan from the BLM. To accurately correlate between all involved agencies, the operator must commit to specific reclamation plans in writing.

If topsoil is available for salvage, the following should be implemented into the reclamation plan: A) depth of topsoil removal, B) volume of topsoil removal, C) location of topsoil storage site, D) detailed plans to ensure erosion protection (e.g. reseeding & berming of topsoil stockpile), E) location and depth of topsoil redistribution, F) fertilization details (e.g. soil analysis, fertilizer type, grade and rate), and G) methodology of seedbed preparation.

The reclamation plan must also include details as to the total projected acreage of disturbance and the total depth of the soil-gravel excavation.

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M.C. Godbe, III  
PRO/027/008-86(1)  
January 28, 1987

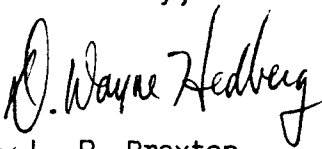
HYDROLOGY CONCERNS:

Title 40-8-12, Rule M-3(1)(f)(h) - DMW

The operator should describe the role of the deep brines in the pilot operation. This information should include anticipated well pumping rates or volumes, an estimate of the relative amounts of surface versus underground water used in the ponds, and describe the spatial distribution of the deep brines in relation to the fresh water aquifers in the area.

The Division will forward a tentative approval notice to the Newspaper Agency for proper public notice once these concerns have been adequately addressed. A 30-day public comment period will follow prior to granting final approval for the revision. The reclamation surety must be finalized and filed with our office or the BLM prior to issuance of the permit to commence operations. Please contact me, Wayne Hedberg or David Wham should you have any questions or concerns.

Sincerely,

  
for L. P. Braxton

Administrator  
Mineral Resource Development  
and Reclamation Program

DWH:jvb

cc: Oliver Gushee  
Calvin Sudweeks  
Jerry Muhlstein  
Randy Thorpe  
Wayne Hedberg  
Dave Wham  
Frank Filas

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